

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion is respectfully requested.

Claims 1-10, 12-18, and 21-23 are pending in the application, with Claims 1, 5, 9, 13-14 and 21-22 herein amended. No new matter is presented.¹

In the Office Action, Claims 1-10, 12-18, and 21-23 were rejected under 35 U.S.C. §112, second paragraph, as indefinite; Claims 1-10, 12-18, and 21-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Marumo et al. (U.S. Patent Publication No. 2003/0000458, hereinafter, "Marumo") in view of Ju et al. (KR Patent Publication 2007-0020879, hereinafter, "Ju").

With respect to the 35 U.S.C. § 112 rejection, Applicants submit that amended Independent Claims 1, 9, 13, and 21 are definite and that Claims 2-8, 10, 12, 14-18, and 22-23, which depend from Claims 1, 9, 13, and 21, are also definite. The Office Action asserts that the Claims are indefinite because elements recited in the preamble are not recited in the main body of the claims and thus are not positively recited as being features of the claimed invention. The Office Action further asserts that those claim elements recited in the body of the claim lack antecedent basis for referring back to elements recited in the preamble.

Elements recited in the preamble of a claim may provide antecedent basis for elements recited in the main body of a claim, but need not be positively recited in the main body of the claim where, as in Claim 1, those elements are not part of the subject to which the claims are drawn, but rather are supporting pieces to be used with the claimed device. In Claim 1, for example, *the pole member including a pair of concave portions disposed one on either side of the examination objective portion* in the preamble provides proper antecedent basis for *the*

¹ Claim 1 is amended to include a feature of original Claim 5 and for clarification. Claim 5 is amended to remove the element included in amended Claim 1. Claim 9 is amended for clarification only. Claims 13 and 19 are amended to positively include only those claim elements that are part of the present invention, for accord with amended Claims 1 and 9 and for clarification. Claims 14 and 22 are amended for matters of form.

pair of concave portions of the pole member in the body of that claim, but the pole member need not be positively recited in the body of Claim 1 because it is not a feature of the examination assistant device but rather an object to be examined using the device.

Applicants submit that Claims 1-10, 12-18, and 21-23 have proper antecedent basis and readily apprise one of ordinary skill in the art of the scope of the invention recited therein, and further respectfully request that the rejections as to Claims 1-10, 12-18, and 21-23 be withdrawn.

The Office Action further rejects Claims 1-10, 12-18, and 21-23 under 35 U.S.C. §103(a) over Marumo in view of Ju. Applicants respectfully traverse this rejection.

Amended Claims 1 and 9 recite, in part, *an examination assistant device used for examining an examination objective portion of a quartz product of a semiconductor processing apparatus having a solution receiver having dimensions for storing the process solution in a predetermined amount to hold the process solution in contact with the examination objective portion.*

In rejecting Claims 1-10, 12-18, and 21-23 under 35 U.S.C. §103(a), the Office Action merely relies on Marumo for teaching a quartz member and a method for metal analysis using the quartz member, but concedes that Marumo fails to disclose the configuration of the examination assistant device recited in the Claims. The Office Action relies on Ju for teaching the configuration of the examination assistant device as claimed.

Ju fails to cure the deficiencies of Marumo. In particular, Ju fails to teach a solution receiver, as recited in Claim 1. Ju discloses a defect check tool that checks for warp and deformation of slot bars of semiconductor wafer boats to prevent damage to wafers, but the tool of Ju has nothing whatsoever to do with an examination assistant device for identifying metal impurities in a quartz product. Rather, Ju is configured to slide into adjacent slots of a wafer boat to check for proper spacing and alignment and is *open* at either end (between align

bars 64) so that it can slide between the slot bars. Thus, the configuration disclosed in Ju can not hold a solution therein, and so does not teach an examination assistant device comprising a solution receiver dimensioned to store a process solution in a certain amount and to hold the process solution in contact with the examination objective portion of a quartz product, as claimed. Therefore, Marumo and Ju can not be combined to teach all of the features recited in Claims 1 and 9.

Even assuming, *arguendo*, that Marumo and Ju could be combined to teach all of the features of Claims 1 and 9, those two references would not be combined. That is, Marumo is directed to determining a level of chemical impurities in a quartz boat and would have no need for a device that slides between adjacent slots of a wafer boat to determine structural warping of slot bars of that wafer boat, as disclosed in Ju. Thus, Claims 1 and 9 are not obvious. Claims 2-8, which depend from Claim 1, and Claims 10 and 12, which depend from Claim 9, are also not obvious for at least the same reasons as Claim 1.

Amended Claim 13 is also not obvious over Marumo in view of Ju. As discussed above with respect to Claims 1 and 9, Marumo and Ju fail to disclose an examination assistant device having a solution receiver with dimensions for storing the process solution in a certain amount to hold the process solution in contact with the examination objective portion and to etch the examination objective portion, as claimed. Further, the references fail to teach a method for examining an objective portion comprising preparing such a device, as claimed. Still further, the cited references would not be combined. Accordingly, amended Claim 13 is not obvious over Marumo in view of Ju. Amended Claims 14-18 are also not obvious over Marumo and Ju for at least the same reasons as Claim 13, from which they depend.

Amended Claim 21 is also not obvious over Marumo in view of Ju. Again, as discussed above with respect to Claims 1, 9 and 13 Marumo and Ju fail to disclose forming a

solution receiver such that the examination objective portion is positioned within the solution receiver and causing the process solution within the solution receiver to be in contact with the examination objective portion for a predetermined time to perform etching thereof, as claimed. Still further, the cited references would not be combined. Accordingly, amended Claim 21 is not obvious over Marumo in view of Ju. Claims 22 and 23, which depend from Claim 21, are not obvious over the cited references for at least the same reasons as Claim 21.

In the corresponding Korean application, a translation of the Amendment filed in the international phase was not filed, and thus original claims 1 to 20 of the PCT application were examined. Rejections were made to those claims by the Korean Official Action that listed Ju. However, the rejections of this Official Action were overcome simply by filing an Argument, and so original independent Claims 1, 9, and 13 of the PCT application have been allowed without any amendments, as Korean patent independent Claims 1, 9, and 13.

It should be noted that, on the other hand, the U.S. pending claims are translations of Claims 1 to 10, 12 to 18, and 21 to 23 of the Amendment filed in the international phase. The independent claims of the Amendment filed in the international phase, i.e., the U.S. pending independent Claims 1, 9, 13, and 21 are formed from the subject matter corresponding to original Claims 1, 9+11, 13+1, and 13+9+11 of the PCT application, respectively. In other words, where the U.S. pending Claims 1, 9, 13, and 21 are compared with Korean patent independent Claims 1, 9, and 13, which overcame Ju, the U.S. pending Claim 1 is the same as Korean patent claim 1, and the U.S. pending Claims 9, 13, and 21 are narrower than Korean patent Claims 9 and 13. The enclosed Claims have been drafted to further limit the U.S. pending Claims 1, 9, 13, and 21, though they are in such a situation.

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Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-10, 12-18, and 21-23 is definite and patentably distinguishing over the applied references. The present application is therefore believed to be in condition for allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

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